

REMARKS

This paper is responsive to the non-final Office Action mailed on June 9, 2009, in which the Examiner re-opened prosecution and issued new rejections of the claims under 35 U.S.C. §§102 and 103. In response to the Office Action, claims 29, 34, and 38 have been amended. No new matter has been added.

For the reasons set forth below, reconsideration and allowance of the pending claims are respectfully requested.

Rejection under 35 U.S.C. § 102

Claims 29, 31 and 38 stand rejected under 35 U.S.C. § 102(b) as anticipated by Lemelson (U.S. Patent 4,900,303).

Lemelson describes a dispensing catheter in which “an implantable device or material is disposed within the operating head of [the] catheter which is caused to move through a body duct to select a location When properly located, a mechanical, electrical, and/or fluidically operated mechanism in the head of the catheter is operated causing a select quantity of an implantable material or an implant to be forced from the head and caused to engage a select portion of the wall of the body duct and attach thereto to retain such implant or material in engagement therewith.” *Lemelson* Abstract.

The Examiner focuses in particular on the embodiment depicted in FIGS. 7, 8 and 14 of Lemelson. *Office Action* at 3. The embodiment in FIGS. 7 and 8 is “utilized to dispense a quantity of a flexible material, such as strip of porous plastic, tissue, gauze or the like” *Lemelson*, column 10, lines 29-33. A “tacky adhesive” 110 is “applied to the front end portion of the folded strip 109, which may be made to engage tissue adjacent the front end of the catheter when such strip is forced through and beyond the opening 103, as shown for example in FIG. 8.” *Lemelson*, column 10, lines 53-59. The porous materials 109 and 109A of FIGS. 7 and 8 may be “impregnated or coated” with medications or adhesive-medication mixtures that can be “slowly dispensed therefrom to the body duct and/or tissue to which the porous material is adhesively bonded as such adhesive and porous material degrades or dissolves under the action of body fluid.” *Lemelson*, column 12, lines 47-65.

The embodiment depicted in Lemelson FIG. 14 is one in which the catheter 152 ejects “a cylindrical, bullet-shaped, flexible, porous member 159.” *Lemelson*, column 14, lines 19-26. A flexible tube 160 is provided in the catheter, and “a plurality of openings 161 in the side wall of the tube permit liquid medication to be flowed through the tube 160 to the porous cells or interstices of the bullet shaped plug 159 to permit such medication to be dispensed by a wiping or swabbing action caused when the piston 156 moves the cellular plug 159 against a select portion on a body duct walines” *Lemelson*, column 14, lines 32-39.

In contrast to the present invention as recited in amended claims 29 and 38, Lemelson does not teach or suggest a lumen occlusion device in which the plug enters the lumen before the delivery instrument during delivery of the plug to the selected location in the lumen. Lemelson teaches delivery of an implant using a catheter, wherein the implant is expelled from the front end of the catheter at a selected location. The catheter used for delivery in Lemelson thus enters the body duct either before or simultaneously with the implant. In the present invention, the plug is inserted before the delivery device, making the expulsion function required for operation of the Lemelson delivery devices unnecessary.

Additionally, Lemelson does not teach or suggest the claimed plug having an outer surface in which a plurality of openings are formed, wherein the openings are spaced from one another and have a shape suitable for allowing flow of a biphasic material such that, upon delivery of the biological bonding agent to the openings by the access catheter, the biological bonding agent extrudes through the plurality of openings to bind the plug to an interior wall of the lumen. As discussed above, Lemelson describes the use of an implant made of a porous material that is “impregnated” or “coated” with an adhesive-medication mixture such that the mixture is slowly dispensed through the pores of the material into the body duct or tissue. Such materials do not have the claimed outer surface in which a plurality of openings are formed to enable extrusion of adhesive through the openings.

For these reasons, amended claims 29 and 38 are patentable over Lemelson.

Claim 31 depends from amended claim 29 and is patentable for at least the reasons set forth above with respect to amended claim 29.

Rejection under 35 U.S.C. § 103

Claims 30 and 32-37 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Lemelson in view of Wallace (U.S. Patent 6,585,754).

Wallace discloses structures and methods of manufacturing absorbable vaso-occlusive members. *Wallace*, column 4, lines 46-48. The term “absorbable” refers to any agent which, over time, is no longer identifiable at the site of application in the form it was injected, for example having been removed via degradation, metabolism, dissolving or any passive or active removal procedure. *Wallace*, column 4, lines 29-33. In certain embodiments, not all of the material is absorbable, and the term therefore includes both complete and substantially complete absorption over a period of time ranging from hours to months. *Wallace*, column 4, lines 33-37.

With respect to amended claim 34, neither Lemelson, nor Wallace, nor the combination thereof teaches or suggests the claimed method of occluding a body lumen wherein the plug enter the lumen before the delivery means enters the lumen, and wherein the plug has an outer surface in which a plurality of openings are formed that are spaced from one another and have a shape suitable for allowing flow of a biphasic material therethrough. Lemelson does not teach or suggest these features, as discussed above with respect to amended claims 29 and 38, and Wallace does not remedy these deficiencies in Lemelson. Therefore, amended claim 34 is patentable over the combination of Lemelson and Wallace.

Claims 30, 32 and 33 depend from amended claim 29 and are patentable over the applied combination of references for at least the reasons set forth above with respect to amended claim 29. Since Wallace does not remedy the deficiencies of Lemelson, these claims are allowable over the art of record.

Claims 35-37 depend from amended claim 34 and are patentable over the applied combination of references for at least the reasons set forth above with respect to amended claim 34.

Conclusion

The application now stands in allowable form, and reconsideration and allowance are respectfully requested.

This paper is being submitted on or before October 9, 2009, and an extension fo the time to respond until that date is requested. The required fee shouldbe charged to Deposit Account No. 04-1420. No additional fees should be due in connection with this paper, but the Commissioner is authorized to charge any additional fees, including extension fees or other relief which may be required, or credit any overpayment and notify us of same, to Deposit Account No. 04-1420.

Respectfully submitted,

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Date:

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